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THE RETURNING HERD *John M. Schreck*

(The Photo-Pictorialists)

The
Photographic Times

VOLUME XL FEBRUARY 1908 NUMBER 2

THE PHOTO-PICTORIALISTS AND THEIR WORK.

BY W. H. PORTERFIELD.

THE year which just closed has been a momentous one for the Photo-Pictorialists. Organized slightly over a year ago with the simple intention of self-help and mutual improvement, and adhering strictly to their original idea, they have succeeded in also accomplishing much toward acquainting the people with the pictorial possibilities of the camera.

Their birth was not announced with

THE WILLOWS *W. H Porterfield*

(The Photo-Pictorialists)

a blare of trumpets or heralded afar in the daily press, their resolve being rather to earn recognition by exerting every energy in consistent and conscientious work.

This method is one which usually consumes much time but the results are all the more satisfactory when success does come.

There is undoubtedly a psychological moment when an adventure planned and executed at that time finds success possible. This element may have been responsible in a degree for the results accomplished, but strenuous work is also a factor without which all the psychological moments known to time would count for nothing.

Perfect harmony among members is indispensable and where the organization is small (the photo-pictorialists' membership numbers eight) the chances of friction necessarily are reduced to a minimum.

When such relations prevail and all questions are decided only after a unanimity of opinion is reached, the disturbing element which disrupts so many worthy societies is eliminated and the strength of the organization remains a unit.

Such is the system under which this Buffalo society operates and it is the endeavor of the members to preserve and stimulate that condition, each one appreciating that it is the only way in which ultimate success will be realized.

Simplicity of organization is also a condition which cannot be over-estimated; elaborate constitutions and voluminous by-laws smack of business and conventionality, to say nothing of the element of restriction which they create, all of which has a tendency to discourage rather than stimulate the natural development of an artistic temperament.

With rules and regulations unknown, there is little need of officers; partisanship and politics consume no time; each member takes an equal interest in the welfare of the society and at all times feels at liberty to make such suggestions as may occur to him tending toward the betterment of things instead of keeping his light under the proverbial bushel with the idea of waiting until his party is in power and consequently depriving the society, temporarily at least, of the assistance without which stagnation and finally dissolution result.

The skeptical person may regard the foregoing as impractical and no doubt a commercial enterprise would find success impossible under such an arrangement; but the conditions which govern the management of a business and those which are necessary to control an art society are so widely divergent that a comparison is really impossible.

The fact remains, however, that several pictorial societies have found this method productive of greater results, for as stated above, it almost eliminates routine business and permits the members of the society to devote the major portion of their time to the study and discussion of their chosen work.

Under any other system the photo-pictorialists would have found it impossible to accomplish the results with which this year's work has been rewarded.

Their initial effort was an exhibition at the Photographic Society of Philadelphia, the account of which is now history.

Immediately following their debut in Philadelphia, the honor of a place in the Corcoran Art Gallery at Washington in conjunction with the Capitol City Camera Club's annual exhibition was tendered and accepted.

Until this time, little had been known of the Photo-Pictorialists in their home

THE MISSION DOOR *Edward B. Sides*

(The Photo-Pictorialists)

city and the means of their introduction was one which afforded them great pleasure and unquestionably reflected upon them, as much, if not more honor, than had previously been obtained by reason of the recognition received at the various galleries heretofore mentioned.

At the request of Mr. Chas. M. Kurtz, director of the beautiful Albright Art Gallery, a collection of ninety pictures was assembled and exhibited during the month of September.

The enthusiasm displayed by the many visitors, was sufficient to convince the doubter that the public would receive and consider photographs as pictures when they contained the necessary artistic quality.

There is still much educational work required in this direction, but with the many worthy societies laboring to this end, it will not be many years until pictorial photography comes into its own.

The work being done by the recently organized Camera Club Interchange is noteworthy. Although only in its first year it has representatives in many of the large cities.

Each club prepares annually a portfolio of prints which goes around the circuit, thus giving each society a monthly exhibit for nine months of the year. The educational value of this enterprise can hardly be over-estimated, as each collection of pictures is accompanied by a "Remarks" book in which each club records its criticisms.

Many valuable suggestions are received and the idea will in time, unquestionably elevate the average of work by reason, not only of the helpful criticisms, but also for the privilege of seeing the work of so many others.

Much information is acquired by the accumulative process and one cannot dwell among pictures without absorbing (though it may be unconsciously) a knowledge which is destined to have its effect and become apparent in the product of the observer.

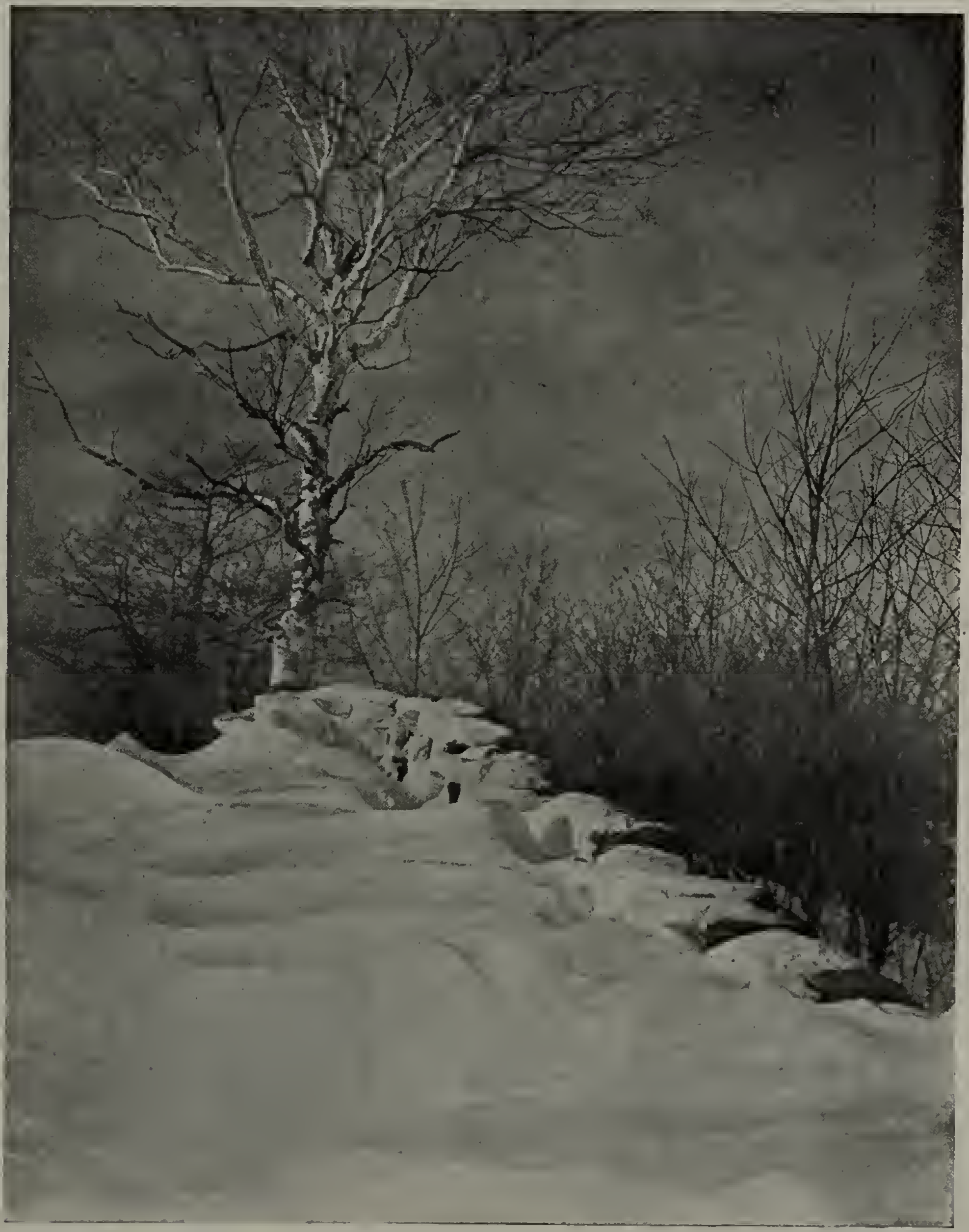
It is for this reason that the Photo-Pictorialists desire to encourage the exchange of pictures among clubs, to exhibit when possible in the galleries of art, and generally to assist in winning for photography a recognition without which it is useless to aspire to a place in the world of the artist.

FOR MEN MUST WORK *Charles Booz*

(The Photo-Pictorialists)

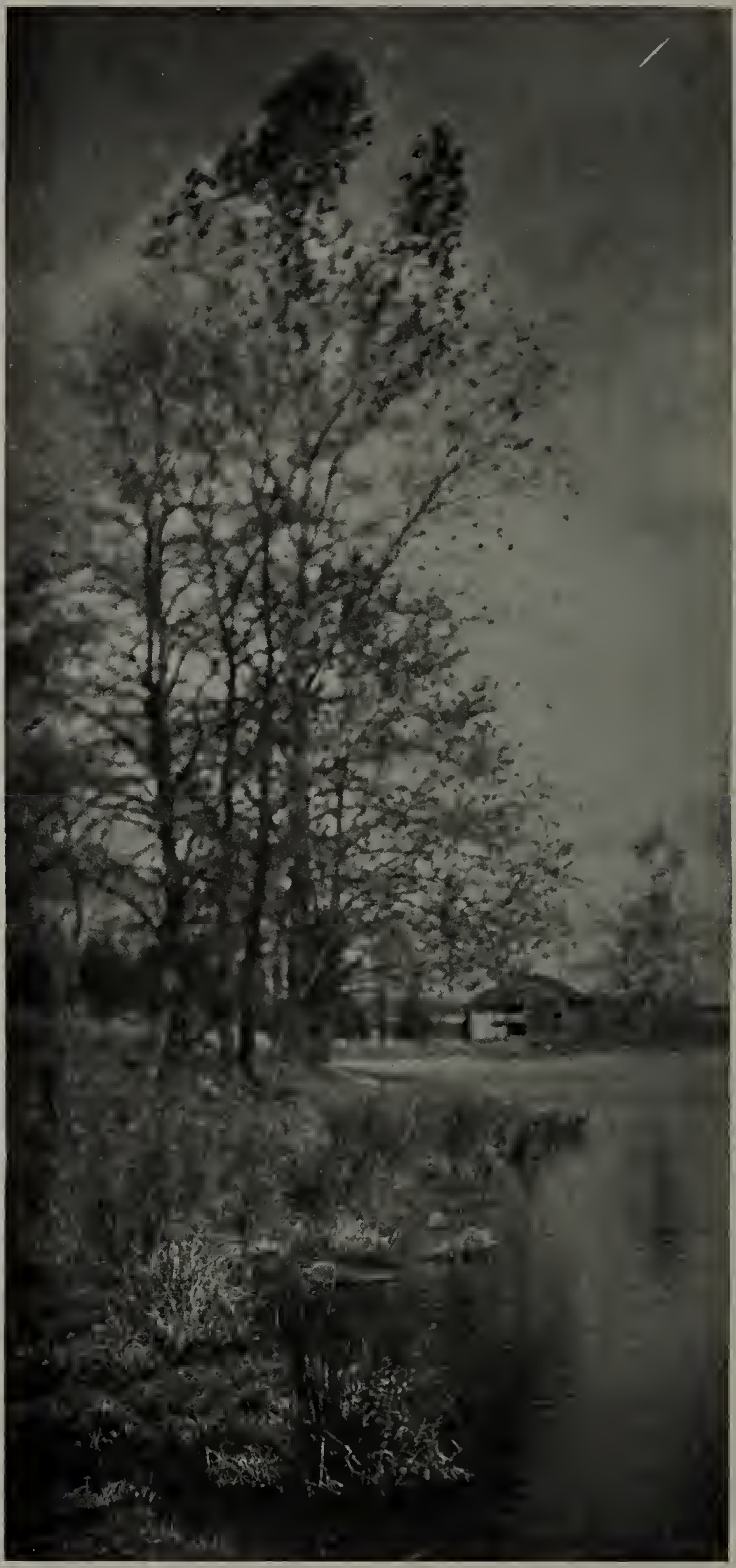
THE MONTHLY COMPETITION

THE average amateur seems to be at a loss to define the word "picture," and to make his photographic efforts pictorial. At first he is so much interested in the technical or mechanical side of the question, that any negative affording sharpness and good detail in the print on any medium is deemed satisfactory—and to our regret many amateurs never get beyond this stage. Those who progress soon feel a lack of something in their photographs, and commence to investigate. They find that some pictures posessing only fair detail are very pleasing, and it is then they learn also to appreciate the merits of diffusion.



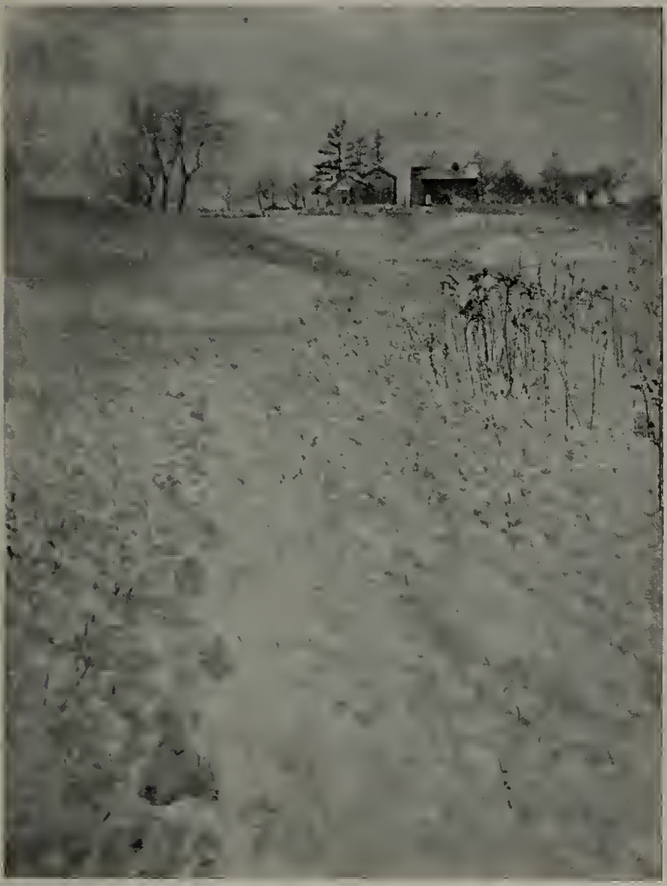
THE WAKE OF THE NORTH WIND *J. R. Peterson*

(Second Prize, February Competition)



A FAIR NOVEMBER MORN *Ernest P. Seabrook*

(First Prize, February Competition)



THE BACK MEADOW, WINTER *W. F. Zierath*
(Honorable Mention, February Competition)

Unfortunately some of these ambitious ones, because their sharp full detailed pictures are not pleasing, at once come to the conclusion that diffusion or "fuzziness" is all that is necessary to render their work truly pictorial. Passing through this stage, the amateur who really studies, sees that something more than either detail or lack of it is necessary, then he learns of *composition*—the thing he should have thoroughly absorbed at first.

Picture-making without a knowledge of composition is like building a skyscraper without an architect. You may erect the structure, but the chances are very much against its being either safe or pleasing. The subject of composition is too extensive to be dealt with within the space allotted to this story, but there are so many excellent and inexpensive books on the subject that the amateur has only himself to blame if he goes without this knowledge.

It is sufficient to say here that a photograph to be a picture or pictorial, must first possess interest, it must tell a story or appeal to some sense or emotion—a mere record of fact can not accomplish this. Eliminate the useless and uninteresting from your picture. If circumstances will not permit elimination, one can at least subordinate or subdue such features so as to leave the true picture, and that only, in prominence. All that pertains to true picture-making cannot be learned in a day or in many days, but much can be learned every day, and with such days added knowledge comes added power, and every effort with this stimulus will be interesting—otherwise picture-making would not be worth while.

The First Award this month goes to Ernest P. Seabrook, for his entry entitled, "A Fair November Morn." It is a pleasure to make this award, as Mr.

"*MARIE*" *Joseph F. Murray*
(Honorable Mention, February Competition)

Seabrook has been a persistent contributor to these competitions, and right along his work has shown conscientious effort and decided improvement. The picture shows the wisdom of elimination, his subject was selected with good judgment and then his print was trimmed so as to include the picture and no more—a sharp knife and good judgment are often an excellent combination. The picture tells its own story so well that comment is practically unnecessary. Data: made in November; time, noon, bright light, one-quarter of a second exposure; Goerz lens, with Ingento Ray Filter. Cramer medium Iso plate, Artura Paper.

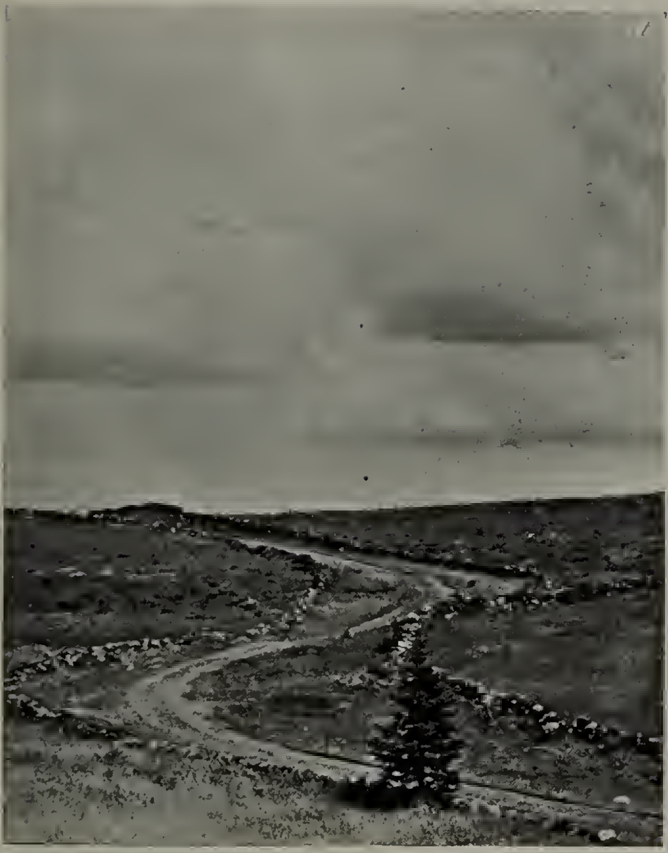
The Second Award goes to J. R. Peterson for the picture entitled, "The Wake of the North Wind." That the title is appropriate and the picture meritorious is most evident. A good title will often help out a more or less mediocre effort, and will certainly be no detriment to a good one. The bleak sky and the storm tossed tree standing defiant of the elements, and the fantastically swirled mass of snow, tell the story plainly. The composition is unusual, one that just happened, but the maker had to be an artist to select just the right view point and the time to properly depict it. Data: made in January, 2 P.M., ½ second exposure, Plastigmat lens, f8, on 5 x 7 Orthonon plate, with Ideal Ray Screen. Enlarged to 8 x 10 on gray carbon.

The First Honorable Mention goes to W. F. Zierath, for the entry entitled "The Back Meadow, Winter." The long sweeping line of the path is good, but the pictorial effect is somewhat marred by the great expanse of uninteresting foreground. Trim off the lower part of the print just below the clump of weeds, and you have all the picture, and just as good composition. Note how none of the effect of distance is lost by so doing. The tonal values of the print are excellent, and the work displays excellent judgment everywhere except in trimming. Data, taken in January, 1/5 second exposure, stop f8, Orthonon plate, enlarged from 5 x 7 negative on Eastman Platino Bromide Paper. No data as to time of day, light or lens employed.

The Second Honorable Mention was awarded to Joseph F. Murray, for his entry "Marie." This is an excellent bit of home portraiture, exposure about right, lighting good and pose natural. We must confess, however, that we would have preferred the picture unvignetted, as the average vignette always looks to have been made in order to conceal some error of the maker. Data, made on dull day, one second exposure, Rapid Rectigraphic lens, stop 8, light from ordinary window. Cheese cloth was placed over the lower half of the window. The lace curtains which reached from the top of the window to the floor were raised from the floor and fastened to a chandelier, this serving as a top light. Blanket used for background. Negative was retouched.

This concludes the awards for this month, there being no other entries deemed worthy of special mention. We receive a multitude of prints each month with requests for criticism, so many, that

CAUGHT *L. E. M.*



THE HILL ROAD *L. R. G.*

it is not possible to criticise any but a small portion within the space allotted to this department. We must therefore select such for this purpose, as in our judgment will best serve as object lessons for all our readers.

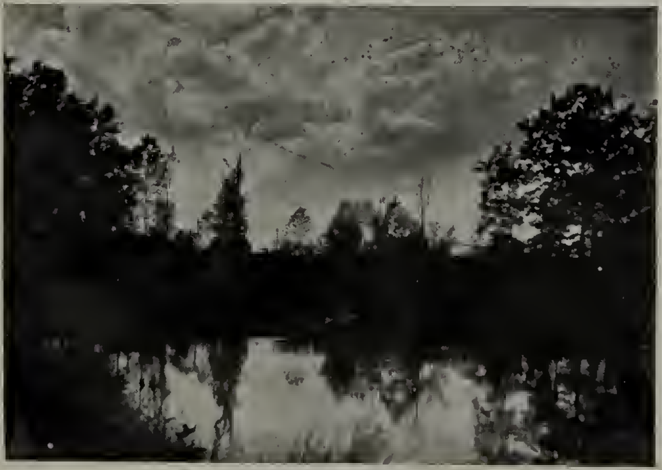
"Caught," by L. E. M. is an attempt at "genre," or a picture telling a story, and like the most of its class, is extremely posed and lacks animation and the spirit of truthfulness. No one for a moment would be deceived into thinking it the "real thing," and it can only be of interest to the party as a remembrance of a harmless masquerade as real "bad" men.

"The Hill Road," by L. R. G. is a splendid example of top heaviness, the sky and clouds seeming about to descend upon the landscape and blot it from view. At least half the sky should be trimmed off, and even then, the composition is bad. The view would have been better from either a much higher or lower elevation.

"The deepening shades o'erspread the golden West, the mottled clouds sweep on before the breeze," by Mrs. A. M. K. The title is accurate enough, but still plentifully weighty to sink a far more ambitious composition than this. The trouble with this entry is that it has no beginning or ending. It lacks balance, practically no foreground, the water actually lighter than the sky, and nothing to lead one either in or out. The exposure 1/25 of a second at 6.30 P. M. in August is utterly insufficient to hold the delicate detail in the shadows.

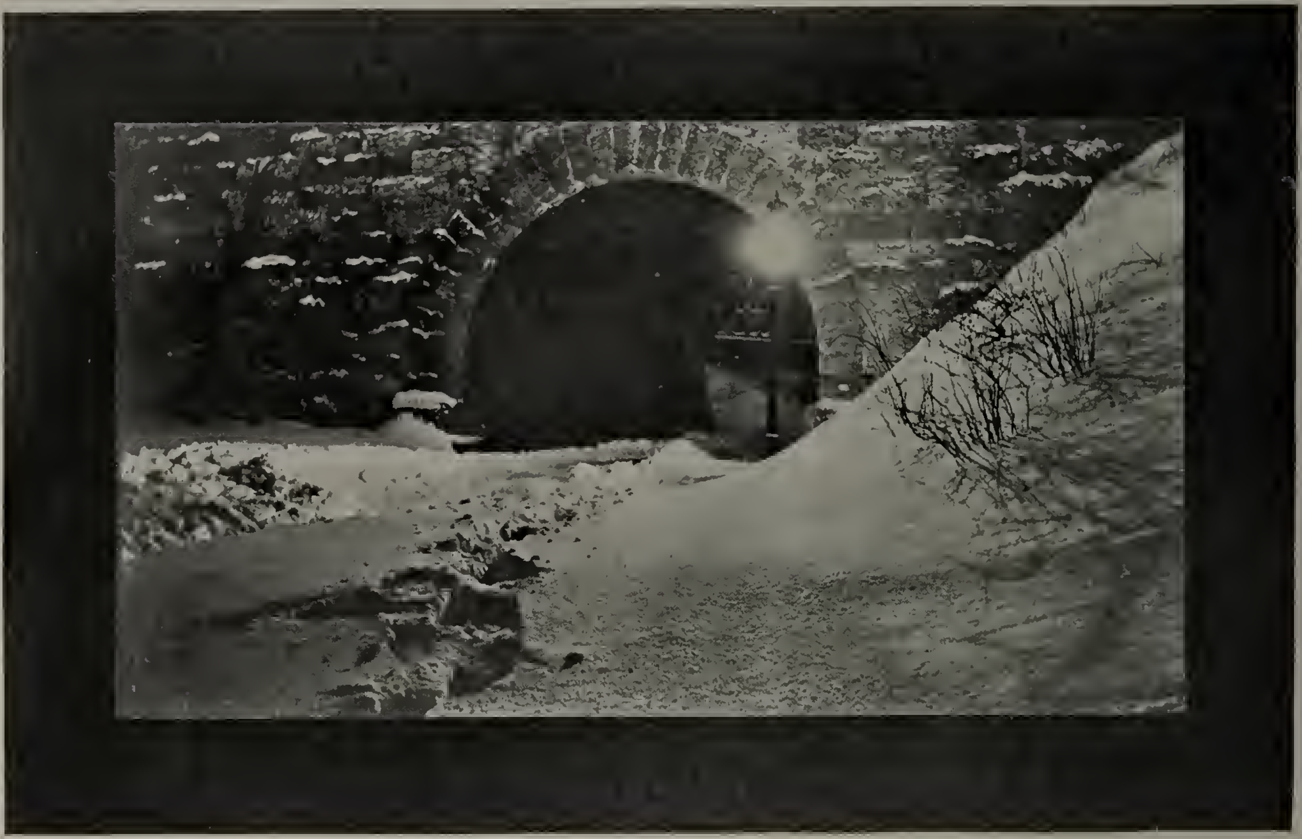
A good book on composition, and a careful study of exposures will help much, as the maker has both feeling and imagination.

It is a good healthy sign, this wanting to be criticised. In no other way can you learn just where you stand; one's personal friends are either unwilling to offend, or lack the necessary knowledge. We hope everyone whose work we have dealt with severely, will take it in good part, and keep coming back at us with better and better prints, till we can at last say that one is truly worth while. Your critic only wishes he could meet you personally and talk it over. He has been through the mill.



"The deep'ning shades o'erspread the golden West
The mottled clouds sweep on before the breeze.'

Mrs. A. M. K.



ONLY LIGHT THE LAMP. *15 minute exposure.*

SNOW PICTURES BY MOONLIGHT AND LAMPLIGHT.

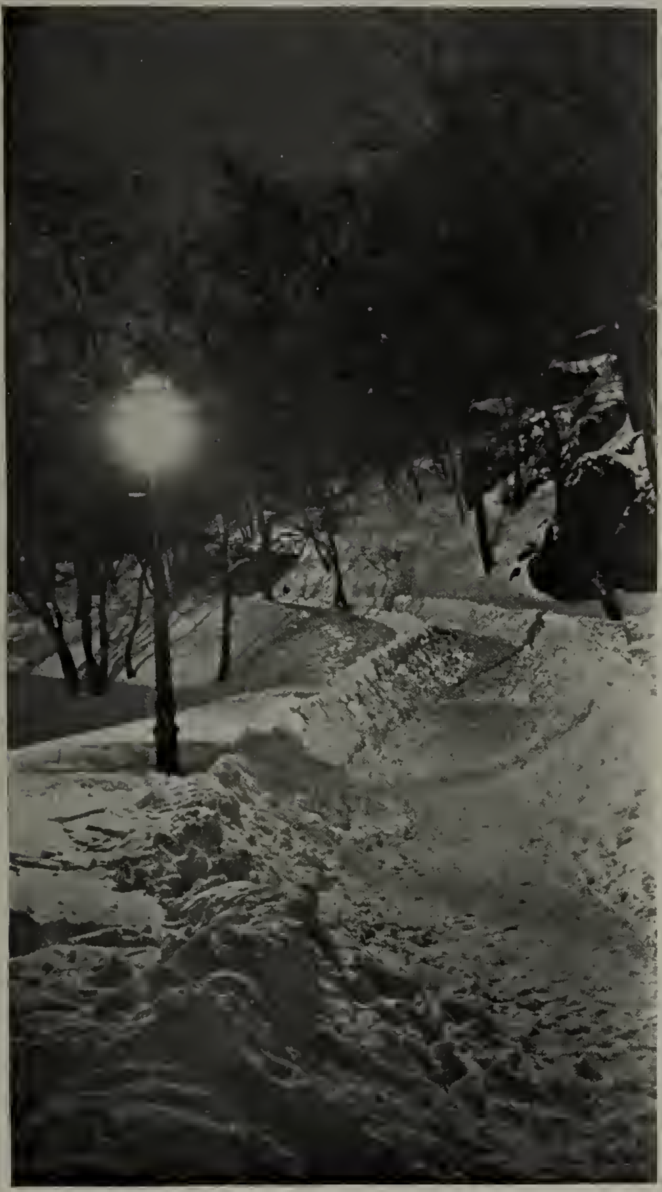
BY GEORGE B. RITTER.

A VERY interesting branch of photography which has not been entered into to any great extent, as far as I have observed, is, making snow pictures at night either by moonlight, gas light, or electric light.

The accompanying pictures were taken in Central Park, New York City, on a dark night in January between nine o'clock and twelve o'clock, without any other light than the lamp. It may sound ambiguous to say a dark night, as most nights are dark, but at the time they were taken it was especially so, as it was just after a big snow storm and in fact it was snowing a little at the time I first started in to work and no stars were out.

The exposure given was fifteen minutes in each case. Of course the exposure was helped very materially by the snow which was fresh and sparkling. I think probably the same pictures taken without the snow would have to be at double the time given.

The matter of exposure though depends as in any other kind of work on the opening of the lens, speed of same, and plate used. I recommend the use of films as being by far the best on account of their speed, and the backing of black paper which prevents halation, as the gas lamps and electric lights were shining directly



ONLY LIGHT THE LAMP. *15 minute exposure.*

into the lens and I doubt very much if any plate without a double coating or backing could have been used, and satisfactory results obtained without the pictures being spoiled by halation.

I find a camera of the fixed focus type with a good single lens the best for the work, as it does away with the guessing at the number of feet, and of course you cannot focus on the ground glass as the light is too weak to see anything excepting maybe the light in the lamp post, and that but faintly, not enough to focus on. The lens must be wide open unless you want to spend the night taking one picture.

During the time I was taking the picture many sleighs, cabs, and other vehicles, as well as pedestrians, passed within the view but on account of the length of exposure did not seem to make and difference, as is generally the case with night pictures.

In addition to the above requirements that it has been my experience as the best to obtain good results I might add, one more as being if anything the hardest of all, and that is a vast amount of patience, as it is no joke to stand out in the cold for several hours waiting for an exposure of fifteen minutes or more. What I did to keep warm, and pass the time away between exposures was to light my pipe and wander around looking for a good point of view to take the next picture, and you would be surprised how quickly the time passes when your mind is occupied in this way.

After all in this kind of photographic work, as in any other, one must have love for the work, and the enthusiasm that always comes with it, and then what would otherwise be a hardship is a pleasure to the really earnest worker.

ELECTRIC LIGHTS BACK OF CAMERA.
15 minute exposure.

LENS TALKS.

A Short Series Dealing with the Choice, the Use, and the Testing of a Lens.

BY C. H. CLAUDY.

Part II—Testing.

HAVING determined within fairly narrow limits—say two or three lenses,—which one you want to buy, you are naturally anxious for some definite method of determination as to your final choice. Now the testing of all lenses is thoroughly done in all reputable factories, and you have a right to believe that it has passed inspection tests, and is perfect, as a lens—as perfect as that particular lens, made by that particular firm can be. But no lens maker tests his lenses in competition with other lenses and advertises the results, unless they are in favor of his lens. This you must do for yourself. All lens houses will give you an opportunity to test their goods, if you can give them some guarantee of good faith and that care will be taken of their goods. If you, for any reason, cannot get a lens from the maker, you can probably borrow one somewhere for the short time needed to test it in.

The following simple tests are very effective, and can be easily made by any one who knows anything about a camera. And they are interesting and educational as well.

One of the first things you will want to know is, is the lens as fast as it is claimed to be? Is the relative opening correctly stated? As a general rule, you will find that it is, but you will like to test it for yourself. To do so, proceed as follows: Fit the lens on a front board and as carefully and as accurately as you know how, focus on some distant object, so that the lens is working at its point of infinite focus. Clamp the camera well so that the lens cannot move from this position. Now paste by the corners, lightly, a sheet of black paper completely over the ground glass, having first put a pinhole through it so it will come in the center of the ground glass. It is important that the lens be in the center of the front board and important that the front board be in the center of the bellows. In other words, neither raised nor lowered. Now, in the dark room, cut a circle from smooth bromide paper, so that it will fit into the cap of the lens. Place it therein, cap the lens, and then set the camera on a table so that a candle flame or the light from a lamp, gas jet or electric light is directly behind the pin hole. Leave here for a minute, and then, in the dark, remove the cap and develop the piece of paper.

Upon the piece of paper will be evident a dark spot, circular in shape. This dark spot is formed from the light rays which have radiated from the pin hole to the lens, and which have been projected, as a parallel beam, through it. It represents the size of the relative opening. By careful measurements with a rule or compass and rule, this size can be obtained in figures. By comparison with the focal length, it is easy to see whether the lens is properly marked. You will have to take the maker's word for the focal length of his objective, but you can check it up in this way,—although not the final word in accuracy. Focus your camera on some small object until the image is identically the same size as the object. Measure, with a rule, the distance of the object from the ground glass, and divide by four. The result should be approximately correct for focal length of the lens. It will be within a fraction of an inch of what the makers state, in all probability.

The next thing you want to know is regarding the flatness of field of the lens. For this test we want two plates, and will really make two photographs. We will tack a sheet of newspaper as smoothly as possible against a wall, and very carefully focus upon an ink spot we place in the center. With the largest stop, we then take a picture. Again we focus, but this time upon an ink spot on one edge of the newspaper, which should come near the edge of the plate. Now the resulting negatives should show the print of the paper equally sharp in both center and edges. If in one the center is sharp and in the other the edges are sharp only, the lens has some curvature of the field. If it is a good lens it will cut sharply all over the plate it is listed for,— in other words, over the angle it is expected to cover. The faster the lens, the less this angle will be—the slower the lens—the smaller its relative opening—the larger the angle can be and still allow the lens to cut sharply.

Another method for testing for flatness of field is to focus as sharply as you can, with the lens wide open, on some object filling the plate—as a large building. Stop the lens to sixteen and make a picture. Then, without moving the camera or altering its focus paste a piece of paper, circular in shape, on the inside surface of the lens, of such diameter that it just covers the stop opening. Then open the lens wide and take another picture. The two pictures should be equally sharp. If they are not, the lens has curvature of the field. In the one case the picture is made with central rays and in the other with marginal rays.

To test for chromatic aberration, we will revert to our newspaper again. Focus so that a whole column is in the field of view. With the lens wide open focus accurately on a line half way between the center and one end of the column. Read this line and note it. On development, if this line is not as sharp as some other line— in other words, if any other line is sharper than this one, there is some chromatic aberration present. It is absolutely essential in this test —it is really essential in all,—that the ground glass and plate are in the same accurate register with the lens.

The test for astigmatism is simple. Astigmatism is the inability to focus horizontal and perpendicular lines lying in the same plane, with equal sharpness. It is caused by a crossing of the light rays—a striking of them on the lens at an angle—difficult to explain in words. It exists, and that is sufficient for this paper. To test for it, draw upon a sheet of white paper a cross,—a heavy black cross, and beside it a light black cross. Have the lines long and straight and sharp. The bigger the chart the better. With the lens wide open, and the horizontal line parallel to the long way of the plate a picture made of the chart should show all the lines as sharp as the one on which focussing was done. Sometimes a porch railing, with uprights and cross bars, make a good chart if a black cloth be hung behind it. Another test for astigmatism, which may yet be bound up with other faults, is to picture foliage, with a snap shot, and have leaves of trees in the corners of the pictures. If they give the impression of being streaky —if they look as if they were elongated at an angle, astigmatism is the cause probably, although spherical aberration will assist in doing this Spherical aberration by the way, is the inability of the lens to produce a sharp image except with a small stop—the marginal rays of light come to a focus nearer the lens than do the central rays. No good lens has this fault—all good lenses produce a picture which is sharp used wide open. The test is simple inspection of any photo made with the lens wide open.

Flare and flare spot are troubles which do not trouble much. But if they are present they are a great annoyance. I say if they are present, meaning if they are noticeably present—all lenses have some degree of flare. Flare is caused by the reflection of light from the surfaces of the lens, and its re-refraction again from the point of reflection. It is so taken care of in a carefully corrected lens that it is distributed over the entire image and except for the invisible degradation of the image is non-existant. Flare spot results from incomplete correction for flare, and, unfortunately, is almost always to be found in good lenses under conditions of severe test—it should never be found in a good lens in common work. The test is as follows: Focus on a flame of some sort—candle flame will do, gas is better and an electric arc best of all, and then swing the camera so that the image of the flame comes in one extreme corner of the ground glass. On the opposite side you will be likely to find a small, dim, upright image of the flame. This is from flare spot. Sometimes it is indistinct and merely a blur of light. A long focus lens on a small plate is less likely to show it than a short focus one,— a lens with air spaces more likely to show it than one without—a double combination more apt to show it than a single one. But no lens should be condemned because it shows flare from this test—if it shows light spots in photographs of brightly lit landscapes with much contrast, or from windows in the view when photographing interiors, then it is to be thrown aside as a badly corrected lens.

It should be born in mind that no lens maker of repute is going to market a badly corrected lens—if he knows it. All the large manufacturers of lenses have reputations at stake and are not likely to be led away from marketing a good product by the possible temporary pecuniary advantage to be derived from selling a poor specimen. moreover, with the perfection of machinery and system which is used in lens factories, it is all but impossible for a poor individual lens to escape the rigid tests, and as a general rule, one lens of a given make is like another of the same make, style for style.

It should be noted that no lens should be tested for a greater angle of view than its makers claim for it. It is idle to take a lens working at F5 and supposed to cover sharply a plate 4x5 inches, at full opening, and test it on an eight by ten plate and condemn it because it shows curvature, loss of definition at the margins, etc. It isn't intended to be so used, and such a test is not a fair test of the lens. On the other hand, you will not be fair to yourself if you make all your tests with the lens directly in the center of the plate—all lenses—with one or two exceptions,—are supposed to have corrections extending enough beyond the confines of the plates they are listed for, to cover a reasonable amount of rise and fall of front. Otherwise they would be of little use to the photographer.

There is still another point. No lens of enormous relative opening can be used on objects very close to the camera without some distortion—and sometimes this amounts to a degree of lack of sharpness which is disagreeable. If you will consider making a life size image of a ball, with a lens of three inches focus, and an aperture of F3 supposing such a thing is possible, you will see what I mean. This would be a lens of one inch in diameter. Suppose the ball was six inches in diameter. A life-sized image would need the ball six inches from the lens (since the focus is three) and the plate the same distance from the lens. Now each half of the lens would extend half an inch beyond the center line of the ball. The resulting picture, therefore, would show more than a hemisphere—it would show a few degrees on either side of the hemisphere, which is against nature, and distortion. But it is nothing which the optician can correct in as much as it is caused entirely by the great size of the lens, in comparison to its focal length.

Never condemn a lens because it has bubbles in it. These bubbles are inherent in the kinds of glass used for the lens and necessary to its construction—if they could get the same glass without the bubbles, be sure they would. But the bubbles in no way interfere with the corrections of the lens and the loss of light they cause by interference and absorption is such a small amount that it can not be measured with delicate instruments.

It is essential in testing a lens that the ground glass and the front board be parallel with each other, as well as accurately in register with the plate holder, and occasionally faults of correction in the lens are found by the amateur tester which can be traced simply to a neglect of this precaution.

In the final paper of this series some pointers on using a fine lens to the best advantage will be given.

"Blessings on thee, little man,
Barefoot boy with cheek of tan!
With thy turned up pantaloons,
And thy merry whistled tunes."
—*Whittier.*

Joseph R. Iglick

Editorial Notes

THE information afforded by non-technical journals relative to photography, is often misleading, and equally often amusing, as will be seen by the following, reprinted from an American Art Journal.

"Up to two years or so ago no photographic expert hesitated to declare that color-photography—that is, the reproduction of colors in photographs—was absolutely impossible. But in these advanced days nothing is impossible, apparently, and now one of the very men who has said all of his life that the thing could not be done has perfected a plate which marks a long and distinct step towards the desired end. Briefly, this man—Alfred Stieglitz, of New York—has developed a photographic plate which, used in an ordinary camera, brings away with it, after an exposure, all the natural colors of the object or objects photographed. This, in itself is a marvelous achievement; and while the development has not gone beyond the plate, as yet, it having been found impossible to transfer the colors to paper, it is quite reasonable to believe, in view of the wonderful progress made in other branches of science and inventions, that within a year or two we shall be offered opportunities to sit for photographs in which the colors of our eyes, hair, and clothing and the tints of our flesh shall be accurately reproduced.

A Frenchman, Mr. A. Lumière, produced a color plate some time before Mr. Stieglitz, but the American's work is admittedly so much superior as to relegate the French invention to the background. It was Mr. Lumière's exhibit in Paris last summer which led Mr. Stieglitz to attempt to produce something better, and from this evidence of the typical American spirit we are led to hope that perfection in color-photography will ultimately be attained by a citizen of this country."

In the first place no photographic expert in the last five years would have denied the possibility of color photography, or in fact the possibility of almost anything. Science, has made so many strides in all directions, that the seemingly impossible of yesterday becomes the possibility of to-day and to-morrow will be taken as a matter of course. We certainly would be glad to learn that our well beloved Stieglitz had "outlumined" Lumière, but as Mr. Stieglitz's training has been along altogether different lines, we are afraid that M. Lumière will still continue the leader in the invention and perfection of natural color processes. It is quite within the possibilities, however, that Stieglitz might obtain better *results* from these plates than anyone else, and this perhaps, is the information our art journal friends meant to furnish.

* * *

This year promises to develop a good many new things in photography. Nineteen hundred and seven will go down into history as the color photography year, and the name "Lumière" is destined to rank with Daguerre, Fox Talbot, and the other immortals of photography.

Prints in natural colors do not seem

such a fancy now since we have so good a foundation to work upon. What country will claim the honor of the discovery?

Writing upon the adoption of modern science, Thomas Bolas speaks thus upon the remedy for that bugbear of all photographic exposures.

"In our day the technics of plate making and development are so wonderfully elaborated, that if the photographer could only be quite certain of his exposure, he might develop by time in absolute darkness, and with a near approach to certainty as regards the result. By an up-to-date application of the photo-electric cell, or that form of galvanic battery which gives its current in response to a beam of light that shines on it, this cell being combined with a galvanometer, it is conceivable that one day we may have a small instrument like a watch, which when set to the conditions of working may instantaneously indicate the required exposure by means of an index needle. The photo-electric cell not only indicates by its current the intensity of the light shining upon it, but it can be color sensitized and screened; so when the new form of photometer or actinometer arrives, we may hope for an instrument which can be set, not only for any stop or aperture, and the sensitiveness of the plates, but also for their color sensitizing. What an element of aid and certainty to the amateur to have such an actinometer set in the hinder part of the camera, the index needle of which would from instant to instant indicate the exact exposure required for the subject towards which the lens is pointed!"

An instrument of this kind would indeed mark a step forward, and make photograph a certainty and pleasure all the way. Given the correct exposure, a plate will almost develop itself, and printing from a normally exposed and correctly developed plate is almost automatic.

Inventors to the fore—.

* * *

The advertising section of any publication means much more to every reader of that publication than would first appear. It not only keeps him informed as to the products of progressive manufacturers interested in supplying him with the newest and best of everything, but in addition, *the advertising section makes the reading section of the magazine possible.* Without the support of the advertisers, the magazine could be issued only at a cost practically prohibitive, for no magazine can exist on its subscriptions alone. In fact, the dollar a year you pay in most instances will not pay for paper, stock and printing. And further, when the circulation arrives at a certain point, every additional subscriber to the magazine means a loss, unless the advertiser steps in and assumes his share of the burden. Thus, the advertiser receives the benefit of the increased circulation, that is what he pays for, and if it is not proven to him by replies to his advertisement, he withdraws his support, and the publication and its subscribers suffer accordingly.

For your own interest it is your duty to read the advertising section, and in writing to a manufacturer, give the name of the publication in which you saw his advertisement. In so doing, you are not only furthering your own private interest in regard to the product of the manufacturer, but you are assisting the publication by showing the advertiser that his advertisement is being read in that particular publication, and affording the most effective reason why he should continue advertising. If you do not mention the publication, the advertiser has no means of determining just which of the mediums he is using, have the best "pulling" power, and while the magazine you are paying your dollar for may be actually yielding the best returns, he will not naturally favor the ones showing the greatest number of responses, mentioning the name of the publication.

Read the advertising section, show the advertiser you appreciate his making a good magazine possible to you at so low a price, and help the publisher to keep up or better his standard by showing the advertiser that his story is being listened to. It's mutual all around.

MONTHLY FOREIGN DIGEST.

TRANSLATED BY HENRY F. RAESS.

Staining Photographic Frames.

For staining white frames weak colored solutions are preferable to a strong, as better results are obtained, especially if one is not skilled in painting. Several coats are applied to the wood which should be well seasoned. For a dull effect use sand paper after staining, or for glossy, use varnish.

Black or Ebony Stain.

English.		Metric.
	Solution A.	
20 ozs.	Water	600.c.c.
1⅔ ozs.	Ferrous sulphate	50.0
	Solution B.	
3 ozs.	Crushed Nutgalls	90.0
20 ozs.	Water	600.c.c.

The nutgalls are boiled for one-half hour and then filtered. The solutions A and B should be kept in separate bottles. They are also to be applied separately, allowing the wood to partially dry between coats. This stain gives good effects on soft woods, on hard woods, after a sufficient number of coats have been applied, paint with the following:

16 ozs.	Water	500.c.c.
1 oz.	Sulphuric Acid	30.c.c.

dry rapidly with heat. If the black is not of sufficient intensity, repeat with the first solutions. After which wash the frames with water to remove any acid.

Brown or Old Oak.

16 ozs.	Water	500.c.c.
½ oz.	Potassium permanganate	15.0

One coat is sufficient, the strength of the solution determines the shade.

Another Brown.

10 ozs.	Water	300.c.c.
1 oz.	Catechu	30.0

The catechu is boiled in the water as it does not dissolve in the cold. The solution should be applied warm. The brown tone may be modified by painting over with the following solution:

10 ozs.	Water	300.c.c.
½ oz	Potassium dichromate	15.0

Black Walnut

10 ozs.	Water	300.c.c.
30 grains	Potassium dichromate	2.0
⅔ ozs.	Vandyke Brown	20.0
30 grains	Sodium carbonate	2.0

Boil the mixture and apply.

Red.

20 ozs.	Water	600.c.c.
4 ozs.	Brazil wood	120.0
½oz.	Alum	15.0

Boil the mixture for a half hour, then add 60.c.c (2 ozs.) of glacial acetic acid and filter.

Turkey Red.

2½ ozs.	Water	75.c.c.
⅔ ozs.	Alizarin paste	20.0
½ oz.	Ammonium hydroxide	15.c.c.

The mixture should be shaken until all is in solution, then add

½ oz.	Water	15.c.c.
8 grains	Alum	0.50

Keep the bottle well corked.

Green.

20 ozs.	Water	600.c.c.
2 ozs.	Copper acetate	60.0
½ oz	Potassium bitartrate	15.0
½ oz.	Glacial acetic acid	15.c.c.

The mixture should be well shaken so as to cause the ingredients to dissolve. The color may be modified by adding:

20 ozs	Water	600.c.c.
105 grains	Indigo	7.0
½ oz.	Glacial acetic acid	15.c.c.

This mixture is boiled. For use add one part to four parts of the above copper solution.—*L'Association Belge,* No. 7, *Photographische Mitteilungen,* Vol. 44, No. 17, '07.

Ferrotype Collodion.

Tintype operators who use a great deal of sensitized collodion, and would like to prepare their own, the following formula can be recommended as it is by Dr. Eder, an authority on photographic matters.

English.		Metric.
90-130 grains	Guncotton	6-8.0
8 ozs.	Alcohol	240.c.c.
8 ozs.	Ether	240.c.c.

After the cotton has dissolved add the following chemicals and shake until all are dissolved:

1 drachm	Ammonium iodide	4.0
½ drachm	Cadmium iodide	2.0
½ drachm	Cadmium bromide	2.0

Developer.

5½ ozs.	Water	160.c.c.
⅓ oz.	Ferrous sulphate	10.0
⅓ oz.	Acetic acid	10.c.c.
⅓ oz.	Alcohol	10.c.c.

To increase the brilliancy of the whites treat the plate after fixing and washing with mercuric chloride solution.—*Photographische Mitteilungen,* Vol. 44, No. 17, 1907.

Boric Acid Toning and Fixing Bath
by J. Gaedicke,

English.		Metric.
33 ozs.	Water	1000.c.c.
1 oz.	Boric Acid	30.0
6⅔ ozs.	"Hypo"	200.0
½ oz.	Lead nitrate	15.0
⅔ ozs.	Ammonium sulphocyanide	20.0
2 ozs.	Gold chloride 0.5% sol	60.c.c.

Dissolve the lead nitrate and "hypo" separately, then add the lead solution to the "hypo," the white precipitate formed should dissolve in the excess of "hypo," if any remains undissolved add more "hypo." Then add the ammonium compound and when this has dissolved, add the boric acid, the latter will take some time to dissolve, and finally the gold solution.—*Photographische Mitteilungen,* Vol. 44, No. 17, 1907.

Repairing Broken Papier Mache Trays.

The broken edges should be covered with a thin layer of liquid glue, and if possible tie cord around in such a manner as to press the parts tightly together. When dry, cover with four or five coats or asphalt varnish.—*Photographische Chronik,* No. 82, Oct., 1907.

Blue Toned Bromide Prints.

The N. P. G. (The German Rotograph Co.) recommend the following method for toning bromide (and presumably gas light) prints a blue and purple color.

English.	Solution A.	Metric.
3⅓ ozs.	Water	100.c.c.
⅓ oz.	Ferric ammonium sulphate	10.0
15 drops	Pure hydrochloric acid	1.c.c.
	Solution B.	
8 ozs.	Water	250.c.c.
30 grains	Potassium ferricyanide	2.0
For use mix:		
7 ozs.	Water	200.c.c.
⅓ oz.	Solution A	10.c.c.
⅔ oz.	Solution B	20.c.c.
½ drachm	Hydrochloric acid	2.c.c.

For purple tones, rinse and add a few drops of ammonium hydroxide to the wash water.—*Photographische Mitteilungen,* Vol. 44, No. 17, 1907.

PHOTOGRAPHY AT CORNELL.

BY S. L. SHELDON.

THE department of Physics at Cornell University gives a course in Photography. The object of the course is intended merely to furnish instruction in the use of apparatus and photographic materials sufficient to enable students to use photographic processes in physical research and experiments of various kinds. There is, however, an advanced course in which facilities are offered for doing research work.

In the regular course instruction is given in using the camera, in making negatives of landscapes, in making prints on developing papers, in producing lantern transparencies by contact and reduction from negatives, in enlarging and in photomicrography, also in the use of the stereopticon with both direct and alternating currents.

Since the department of Physics has moved into the new Rockefeller Hall a large section on the third floor has been devoted to the subject. The exposing room is well lighted with a northern skylight. It is also provided with mercury vapor lamps and contains camera stands for copying pictures for lantern slides an enlarging camera fitted with a Planar No. 13 working with an aperture of f4, so rapid that Velox can be used instead of bromide. The exposing room also contains a microscope with camera for making photomicrographs. Just off this room is the locker-room where the students may keep their supplies. This is also provided with a large sink for washing negatives and prints. The next room is the apparatus and chemical room where the cameras are loaned to the students and scales and chemicals are provided for their use. Next the dark-room merits special attention from the fact there are no doors nor curtains but is absolutely dark and provided with splendid ventilation. The phenomenon of light being unable to turn around a square corner is made use of in constructing this room. A winding passage way permits a person to enter while the light must stay on the outside. This large dark-room is divided into several small ones so that each student may have a separate place to work. The stereopticon room is provided with a stationary lantern and a screen, where one may learn to make the proper adjustment of the light so that the screen is receiving the greatest amount of light possible and without an image of the carbons or colored circles. One can learn here also the great advantage of using direct current over the alternating, especially when the crater of the arc is used as the source or in other words using the upper carbon as the positive. The room for developing papers is also interesting. It is provided with desk room for each individual. The paper is placed against the negative in a printing frame in this room, then is taken to an adjoining room for exposure where many different sources of light are used. The negative can be placed at various distances from the source and the effect noted. It is always found that the rule of the square of the distance must be observed if the prints are rightly timed. From this room the paper is taken to the developing room and the results of the exposures are learned in the developing baths.

Each year about 200 students take advantage of this course under the direction of Prof. Geo. Moler.

STRAY NOTES ON THE CARBON PROCESS FOR AMATEURS.

BY OWEN ROBERTS.

Sensitizing the Tissue.—The home sensitizing of tissue is the simplest of photographic operations. I, myself, always use the citric acid and ammonia formula, which is as follows:

Potassium bichromate	½ ounce
Citric acid	1 dram
Water	25 ounces

When dissolved, strong ammonia is added drop by drop with stirring, until the orange color changes to a yellow. The change is very distinct, but I have heard a photographer say that he could never be sure when it had taken place. In such a case a little of the solution may be poured into a separate glass before adding the ammonia, and kept for comparison. When the change has taken place, the portion put on one side may be added, and unless it is comparatively large, or the photographer has been particularly careful not to add a drop more than is necessary, he will find that even after adding it to the main quantity, the yellow color persists. If it does not, another drop of ammonia will generally put matters straight again. In this solution the tissue is immersed a sheet at a time, and is left for three and a half minutes, which I time with a little "egg-boiler." It is then taken out, drained for a minute, and squeegeed gently on a clean sheet of ferrotype, on which it is left to dry. I sensitize pieces of tissue 9 x 7 inches, and then cutting a quarter of an inch off all four edges, it divides up into four full size quarter-plate pieces. Whatever size tissue is used, it is a wise precaution to sensitize a piece half an inch larger each way, and then, just before printing, to trim the tissue down on all four edges. In this way the part which has been most exposed to the atmosphere during drying is removed; and, I believe, if this is invariably done, all need for a safe edge is removed. The tissue on the ferrotype need not be dried in the dark, but stood on one side in any ordinary warm room; so long as it is not put in direct sunlight or out of doors, there is no fear of the light getting to its sensitive surface and spoiling it. It should be left on the ferrotype till it is actually wanted for printing, as this protects it not only from light, but from impurities in the air, which, in carbon work, are almost as injurious. It is best to sensitize tissue a couple of days before it is wanted for printing, as this gives it time to get thoroughly dry, and so does away with any risk of tearing it in trying to get damp tissue off the ferrotype; it is important for other reasons also, to print with well dried tissue.

* * *

About Buying Tissue.—If the carbon process is to be used to any extent beyond the merest trial, it pays the amateur to buy his tissue by the roll, and insensitive. In such a condition it will keep any length of time. It is easily cut up, and any odd size that may be wanted can be cut, often with considerable economy. It is almost as economical to buy it in large cut sheets; these have the added advantage that they are easily kept flat, in a portfolio or drawer, and so remove any possible chance that in cutting up the tissue, if it is very dry, the surface may get cracked when unrolling the length. In any case, a quantity should be got at a time. In using it, the color should be writen in pencil on the back of each separate piece as soon as it is received, or, in cutting it up, as soon as it is cut off, as the different colors look so much alike when in tissue form, that it is only possible to tell them apart when they are very widely different, like sepia and sea green for example. The same advice applies to transfer papers, which are more cheaply bought by the roll than in cut pieces; only in their case there is no fear of breaking the surface in unrolling. The back of each piece ought to be marked wth a pencil to prevent accidents, as when wet it is very difficult with some papers to tell the back from the front.

* * *

The Safe Edge not a Necessity.—The belief that a safe edge is a necessity in carbon printing is not quite borne out in practice. Unless very rough transfer papers are being used, or the carbon print is to be developed on glass, two cases where the risk of washing up is the greatest, the safe edge is not essential. When the whole of the negative is being printed in a frame of the usual type, the edges of the frame itself act as a safe edge and vignette off the picture, so that frilling is avoided. Another dodge which provides a safe edge without any trouble is to get a few pieces of glass or celluloid, the size of the negative to be printed. Spoiled negatives do very well. After cleaning them, lantern slide binding strips, cut in half lengthwise (as as sold they are are too broad, are stuck along the edges, so as to make a mask. One of these is placed in the printing frame, first, and then the negative to be printed is put with its glass side next the side on which are stuck the binding strips, and so a temporary safe edge is at once obtained. Brunswick black, or Bates black varnish, may be applied to the glass or celluloid instead of the lantern slide strips, for the same purpose, and the same materials can be used to give permanent safe edges to the negatives if required.

* * *

A Hint Concerning Damp Tissue.—When we come to squeegee the print down on the transfer paper, we may find that it will not adhere properly, particularly when the transfer paper is very rough. This is due to the tissue not being properly dry during printing. We rely upon its power of absorbing water to suck it tightly on to the paper to which we squeegee it. It is for this reason that we watch for that uncurling which denotes the proper moment for withdrawing the two together, in contact, and squeegeeing them. If the tissue, on putting it in the water, is limp instead of dry, it will not curl up, and the uncurling therefore cannot take place, and we lose our sign. Moreover, it will already have absorbed much water, and its power of adhesion will be lessened in consequence. See, then, that the tissue is so dry before printing that it does not feel in the least limp; at the same time, it need not be so bonedry as to involve risk of its surface cracking. It can only be got into such a condition by being put in a calcium tube, which is not to be recommended, except for special purposes.

* * *

Local Work on Carbon Prints.—A certain amount of local work can be done on a carbon print by means of cotton-wool, but it requires a great deal of care. The smoother the transfer paper, the less risk is there of injuring the print, while very rough papers make it almost impossible to touch the tender surface with the softest medium without breaking the film. The high lights, where the gelatine film is excessively thin, it should always be remembered, are much more tender than the shadows, with their comparatively thick coating. To use the cotton-wool, a tuft should be allowed to expand in the warm water into a very soft mop, and, keeping the print well under water, this mop may be very lightly drawn across its surface. However far development with warm water alone has been carried, the mop of cotton-wool will always remove a little more of the gelatine and pigment, as can be seen on looking at the wool itself, or by comparing the parts it has traversed with the rest of the print. A camel-hair brush may be used in the same way, but on the shadows rather than on the high lights, always remembering that the smoother the paper, the more liberties may be safely taken with the print.

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Preparing Transfer Paper.—Every carbon-worker at times wishes to prepare some drawing paper or other material to use instead of the regular trade transfer papers. It is quite easily done, and many formulæ have been published at different times for doing it. Here is my own method, which, however, did not originate with me, but was shown to me many years ago by an expert amateur worker whose carbon prints took more than fifty medals at a time when medals were less common than they are at present. An ounce of Nelson's X opaque or soup gelatine is allowed to swell in six ounces of cold water, until perfectly soft and flabby, and the jar containing it is then stood in boiling water for the gelatine to liquefy. Fifteen grains of chrome alum dissolved in an ounce of hot water are then stirred in, when the solution will once more become ropy or thick. I use a strip of glass an inch or so wide for stirring—a slice off an old negative, in short. The ropy mass is then put into another jar, and the strongest glacial acetic acid is added little by little, with stirring until it is once more liquid, in which form it is ready for use. The paper to be prepared is pinned on a drawing board, and with a soft brush the liquid is applied to it all over, going over it first in one direction and then in another, to make sure all the interstices of the paper are occupied with the gelatine. The surplus is then swept off with a stroke or two of a flat squeegee, and the paper hung up to dry. The surplus may be put back into the jar for use for the next piece of paper. Paper, so prepared, will keep any length of time; and it saves labor to prepare a number of pieces at once.—*Photography.*

Notes and Extracts

Among the Competitive Awards to be made at the Fourth International Fishery Congress to be held at Washington, from September 22nd to September 26th, 1908, we note that Messrs. Holt & Co., the New York publishers, have offered a prize of $100 in gold for the best series of photographs with brief descriptions illustrating the capture of food or game fishes. Here is a chance for the camera sportsman to score.

* * *

The Photographers' Association of Wisconsin have decided on April 28, 29, and 30th, 1908, as the dates for their next convention. J. M. Bandtel, 477 11th street, Milwaukee, Wis., the efficient secretary of this enterprising association, will be glad to furnish further information to all interested.

* * *

Davenport, Iowa, has been selected for the Annual Convention of the Photographers' Association of Iowa, the dates being May 12th and 15th, 1908. T. Will Runkle, Secretary, Cedar Rapids, Iowa, on request will furnish all particulars as to awards, etc.

* * *

The Legitimate in Photography.—The following pointed remarks by Horace A. Mummery made during a recent lecture at the Royal Photographic Society shows distinctly that he holds a brief for pure unadulterated photography. Possibly some of our readers may have something to say in defence of the other side of the question.

"There is a task awaiting someone with a critical faculty and unbiassed judgment, namely, to set down in plain English the position of photography in art. The older forms of art have settled down more or less in their places, and it is possible to get a general idea of the scope of any particular process, so that we may know what is better expressed in one way or better suited to another.

"One artist paints in oil, another in water, a third may etch, one man may do them all, but there is no question as to what technique is best suited to a hog-hair brush or to an etching-needle, it is the business of the artist to bring out the beauties of the medium in which he works. I myself like a photograph that looks like a photograph; it is of course ridiculous for anyone, especially an outsider, to say this method or that is not legitimate; any means by which a worker can control his process is legitimate, the result is the test; photography, like every other artistic process, has certain qualities of its own; on these depend its interest and charm, and they may very easily be destroyed or exchanged for other that are less satisfactory or quite *unsatisfactory*.

"The interest of a photograph consists to my mind in the fact that it is a photograph, and not a chalk drawing, or an etching, or any other black and white process. It has a certain freshness and *naïveté* of its own, and the attempt to force it into any other guise is inartistic and ill-advised; to turn its delicacy into rough granulation and to wantonly cast away its refinement of drawing, to try to make it anything else but a photograph is an error in taste and judgment.

"I see prints about where the aim seems to have been to imitate the unfinished look of a sketch. It seems curious to go out of the way to produce roughness, blemishes if you like, that arise out of quite another process, that of the hand quickly flooding paper with color or attempting to hastily make a tint with a pointed instrument.

"The painter has discovered that purity of color, or quality of touch, come with that direct and hasty treatment. The roughness is the convention of sketching, it is agreed that it is to be overlooked for the sake of the color or vigor of the result, but it is not the virtue or merit of the sketch. Such purely imitative tricks are beneath notice. I cannot imagine that they would appeal to any photographer. But the tendency to overstrain the medium, to work for textures and effects not native to it, appears even in the higher branches of photography."

—*Photographic News.*

THE ACID AMIDOL DEVELOPER.—During the last fortnight I have had to make a series of experiments with various developers to find one of a particular character, which should be suitable for both plates and papers, and should keep a reasonable time and give good gradation without fog or stain. It is unnecessary to enter into all my experiments, which were made with various makes of plates and bromide and gaslight papers, but I have finally come to the conclusion that the acid amidol developer, as suggested by M. Balagny, is the most satisfactory.

The first point to decide was its keeping powers. A certain quantity of developer was made up and some used out of the bottle, the rest carefully corked and put on one side and used at intervals of three days. The test employed was a plate exposed in a H and D machine and cut into strips, and care was taken to insure constancy of temperature of the developer at each trial. The duration of the test has been exactly eighteen days, and six tests of the developer have been made. Careful reading of the test strips has proved that the developer retains its activity for this time, notwithstanding the slightly increased pink tinge which the developer takes on in time.

For plates sufficient density was obtained with five minutes' development at 60 deg. Fahr. The factor I cannot give because it was not observed. Compared with a metol-hydroquinone developer there was in all cases less fog, but development was more prolonged.

The formula used was:

Sodium Sulphite	420 grains.
Acid Bisulphite Lye	50 minims.
Amidol	140 grains.
Distilled Water	20 ozs.

Dissolve in the above order.

With bromide and gaslight papers the same developer was used with the addition of ½ grain of ammonium bromide per ounce. With correct exposure the image appeared in 60 seconds and development was complete in about four minutes. There was absolutely no trace of fog, and the image was in both cases a very rich blue black, showing full gradation.

For testing the papers a gradometer or negative with squares of known density was used, and it was, therefore, possible to determine exactly how long to continue development so as to obtain the longest scale of gradation. I think that those who will try this developer will be pleased with it. Obviously as with all others it is permissible for plate work to add as much bromide as one likes to the developer. The addition of bromide certainly slows its action and slows the plate, and is therefore useful in cases of time exposures. A more rapid developer can be obtained by increasing the quantity of sodium sulphite, but the developer then gives more fog and will not keep so well.—*Exchange.*

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MR. C. H. CLAUDY TELLS OF WONDERFUL DISCOVERY.—Before a large and appreciative audience of amateur and professional photographers at the Photographic Club, 870 Linden ave., Baltimore, Mr. C. H. Claudy, of Washington, well-known for his writings, on natural color photography, gave the results of his experiments and talked interestingly of the probable progress of what he said "the scientific men consider one of the most marvelous perfections of the last 50 years."

Mr. Claudy handled his subject with skill and gave a comprehensive sketch of the progress of color photography since last June, when the plates were for the first time brought to this country. He said:

"There are only about 1,000 plates being turned out daily, when I believe from the demand that 10,000 could be sold in an hour. The geologists of Washington are wild at the discovery that the natural tones of cross sections of different stones and rocks can be produced absolutely like the original."

Continuing Mr. Claudy told of his first experiments with color photography and the pardonable excitement be felt when the first shipload arrived from Europe and it was his privilege to work on the plates. "For five days," he said, "I was in a tremor of excitement."

Speaking of portrait work with color photography he said that personally he had not done so much of this, but that during the spring, when the skies were clear, he would endeavor, and he thought with success, to obtain portraits of anything he wanted in the flesh tints.

Beautiful exhibitions of the work of photographers, including Mr. Claudy, were shown through a lantern on a large screen, and so wonderful and true to life were the butterflies, fish, and insects shown that frequently the audience burst into long and continued applause at the mere appearance of a picture.

"The great trouble with color photography at present," said Mr. Claudy, "is that the hardships of manufacture are almost indescribable, but we hope for excellent results in the future."

* * *

MISSOURI CAMERA CLUR.—The closing of the third annual exhibition of the Missouri Camera Club prompts the statement that, for a number of years, nothing of its kind has been attempted in that city. Several attempts have been made to form a club devoted solely to pictorial work, and while all have died aborning, that the efforts of the above club have not been in vain has been demonstrated in their recent exhibition in their clubrooms this year.

The exhibition opened December 30, with 155 framed entries presented to the public, and, in the opinion of Messrs. Carl Gustav Waldeck, Prof F. O. Sylvester and Wolf T. Kandelar, the artists who judged the work, it is a long step in the right direction, and worthy of the support of the art-loving classes of the city.

The club has commodious quarters at 3546 Washington avenue, corner Grand and Washington avenues, which were elegantly lighted and which tended to show their work advantageously to the hundreds who participated nightly in the club's hospitality. The club is a member of the American Federation of Photographic Societies, and will, in the near future, present to the people of St. Louis the "Federation Salon," which is now being shown throughout the larger cities of the East. It may be mentioned in this regard that several members of the club have had their work admitted to the "salon" this year.

* * * *

TONING BLUE PRINTS.—You do not say what tone you require; but blue print can be changed to a brown tone by placing the dry prints, first of all, in

Liquid ammonia (.880) ...	6 minims
Water	1 oz.

As soon as the colour has disappeared, rinse for a few minutes, and transfer the print to

Tannic acid	1 gr.
Water	1 oz.

In this solution the prints will gradually assume a brown colour. The intensity of the brown deposit is increased by adding a drop or two of the ammonia bath to the tannin solution, but this procedure is apt to cause staining of the high lights.

THE SIZE OF CAMERA AND PICTORIAL WORK.—When considering the purchase of apparatus, the photographer is often a little exercised in his mind as to what size of camera to buy. There are enthusiastic advocates for all the popular sizes, and each one claims his own favorite as best. The quarter-plate man will descant on the lightness of his camera and kit for touring purposes, and the small expense to which he is put in regard to plates. And these are certainly two distinct advantages. Enlarging is ever growing more popular, and the quarter-plate man is as well off as his brother of the larger-sized plate; for given a good crisp quarter-plate negative, it will enlarge to make a picture of quite considerable dimensions without loss of quality. So that there are strong arguments in favor of the small quarter-plate outfit.

Then the worker who adopts the 5 x 4 size will tell you that it is a better size for all-around work. The print is not so small as quarter-plate, he will say, and yet, if the subject is carefully composed, it will include all the essentials which remain after a half-plate print is trimmed. He, too, will insist upon the advantages of lightness and small cost; whilst if he wants larger pictures he can also enlarge.

The half-plate man, will generally admit these arguments in favor of the smaller sizes, but his strong contention is that half-plate is really the most useful size, because one can get pictorial half-plate prints by contact, whereas the smaller sizes tend to insignificance. And it must be admitted that this contention is very sound. There are few pictorial quarter-plate or 5 x 4 contact prints which do themselves justice. The proportions of the pictures are so small that the effect is considerably minimized. A half-plate print, on the other hand, will give the subject a fair chance. And, of course, the half-plate can be enlarged quite as advantageously as the smaller sizes.

The question, then, resolves itself into what class of work the photographer intends to do most. If the major portion of his prints are to be contact, and expense is not a vital question, the half-plate size will give the most satisfaction. If, however, the worker intends enlarging, then he can adopt the smaller sizes, and gain the increased comfort and minimized expense.

If course, there are a large number of amateurs who do not care to tackle anything larger than quarter-plate, nor to enlarge; and these manage to get a vast amount of pleasure out of their hobby. But the photographer who is aiming at pictorial results will certainly have to go in for enlarging if he uses a small camera.

The ideal arrangements is to have a quarter-plate and also a half-plate outfit. Although this involves some extra initial expense, it will be found extremely convenient, as either one or the other can be used according to whether negatives for contact printing or enlarging are required. The expense is thus evenly distributed, and the maximum efficiency secured at minimum trouble.—*Focus.*

* * *

How to Develop Doubtful Exposures, by Dr. Weeks.—The time of exposure of photographic plates is of the greatest importance in obtaining fair results. Most failures must be ascribed to incorrect exposure, and not only the beginner, but also the expert frequently experiences difficulty in determining the correct time of exposure.

To determine same, however, not only the sensitiveness of the plate, distance of the object and size of the focus have to be considered, but also the momentary intensity of the light and its quality, as well as the distance of the object intended to be photographed, which it is hardly possible to calculate with mathematical correctness.

These circumstances require a different method of overcoming uncertainties, so that even large fluctuations in the time of exposure can be adjusted with certainty. A good medium to achieve this is offered by systematically selected development, as shown by tests made by Baron Hübl of Vienna, and quoted extensively in American contemporaries. Even plates over-exposed 500 times can still, by suitable development, be made adaptable to printing.

Pictures can be divided into three classes, with regard to approximate correctness of exposure, namely:

1. Snapshots and portraits taken in the studio.
2. Plates approximately correct.
3. Plates which are likely to be considerably over-exposed.

Regarding No. 1. An over-exposure is hardly possible, therefore the plate can be developed in the usual manner.

Regarding No. 2. The following glycin developer should be prepared:

Sulphite sodium	1¼ ozs.
Boiling water	2 ozs.
Glycin	½ oz.
Potassium carbonate	2½ ozs.

The carbonate must be added slowly, as this solution develops carbonic acid, causing it to effervesce. This will produce a thick liquid solution, which will keep for months, and all that is necessary for use is to add water.

In the case of plates approximately correct, the strength of the developer should be reduced with fifteen to twenty parts of water, and then well stirred. Should the temperature exceed 65 deg. F., some bromide (5 to 10 drops of a 1 to 10 solution to 3 ozs. of developer) is added.

If greater over-exposure is feared, the developer had better be weakened in the proportion of 1 to 80. Development will then take place pretty quickly, and should be finished in about 30 to 40 minutes in a medium temperature.

A solution as weak as this can also be used for the development of under-exposed plates; they act, however, a little more slowly, but the same result that a more rapid developer would produce is obtained in the end. This weak glycin developer can therefore be used without scruple for both under and over-exposed plates.

It is advisable, especially when confronted with a large number of plates, to use the developing devices on the market—for instance, the tank developing apparatus, which will take from twelve to twenty-four plates, and which is provided with a light-proof lid. In this way the plates will not be exposed to the injurious action of the dark-room light, which, especially in the case of orthochromatic plates, is of great importance. The liquid contained in the tank offers the atmosphere only a small surface for action whereby an oxidation of the developer is more or less prevented. The plates are partly taken out of the developer from time to time, in order to control the developing process as it goes along. After the plates are fully developed, they are rinsed for a short while and put into the fixing bath.

In regard to No. 3. Plates likely to be considerably over-exposed are often met with in the case of objects taken at a great distance, which, even with seemingly short exposure, are liable to be enormously over-exposed. To correct this, the following modification of the above described developer should be used:

Water	5 ozs.
Glycin developer, as per No. 2	25 m.
Bromide solution (1 to 10)	5 m.

This solution is to be cooled to 45 deg. F., which can be done by putting small pieces of ice into the solution. The plates are now placed in the developer, and it should be observed how long it takes until the firsttraces of the image apper, from which the time of exposure can be judged, and it can then also be ascertained how the remainder of the development should be proceeded with. Should the first traces of the picture not appear before about fifteen minutes, the plate is correctly exposed, or at least not over-exposed to too great an extent. In this case the development had better be finished in the same solution, which will take one to one and a half hours. Should the first traces of the picture appear before fifteen minutes, a great over-exposure has taken place. The plates are then taken out of the solution without delay, and brought, without being rinsed or washed, into a well cooled concentrated developer, with a liberal amount of bromide of the following composition:

Water	3 ozs.
Glycin, as per No. 2	50 m.
Bromide solution (1 in 10)	50 m.

But should, after the lapse of about thirty minutes, no traces be visible, the plate was under-exposed, and the development should be continued in a faster-working solution.

If this method is employed even negatives with serious mistakes of exposure can still be made to produce good results. In cases of considerable over-exposure the negatives show a brownish discoloration, which is an advantage to their printing qualities, as it increases their often insufficient density.

—*Photographic News.*

* * *

Keeping Sensitized Carbon Tissue.—One of the drawbacks of the carbon process is the difficulty of keeping the tissue after sensitizing. The addition of citric acid to the sensitizer, as suggested by H. W. Bennett, considerably improves matters, but even this is not satisfactory for long.

Some experiments described by Dr. George Hauberisser in the current month's *Photographische Korrespondenz* show, however, that it is possible under certain conditions, to keep the tissue for six weeks.

Instead of using any inorganic chromate or bichromate, he employs monochromate of methylamine, $CH_3NH_2H_2CrO_4$, which is obtained by neutralizing a solution of chromic acid with methylamine.

Methylamine, which has the formula CH_3NH_2, is a colorless gas at ordinary temperatures, but can be obtained in a compressed state. It is, however, easily soluble in water, and can be obtained in a 33 per cent. solution. Unfortunately, it is rather expensive, costing about 5s. per ounce. From the above formula, it is obvious that 31 parts of methylamine would be required to neutralize 100 parts of anhydrous chromic acid, CrO_3, and admitting the water the result would be 149 parts of the methylamine chromate; therefore, this would mean the production of about 4¾ ozs. at the cost of 5s. for the methylamine and 6d. for the chromic acid, and its sensitizing powers would equal about 9½ ozs. of potassium bichromate at a cost of about 6d. It would seem a doubtful benefit, therefore, or at least not practicable commercially, to use this, particularly in the face of the other experiments.

It is well-known that the neutralization of the bichromate with ammonia not only gives greater sensitiveness, but also increases the keeping powers of the tissue, and Hauberisser has tried the effect of keeping the tissue in an atmosphere of ammonia with excellent results.

The ordinary potassium bichromate was used, and enough ammonia added to convert the solution into the well-known lemon-yellow color. The tissue was sensitized and dried in the usual way, and then placed in a large stoppered glass vessel with a tube of ammonia at the bottom. It was then found that the tissue kept in the dark was as good and as sensitive six weeks afterwards as immediately after sensitizing.

Whilst liquid ammonia is suggested, there can be no objection to employing the lump carbonate, which would be more convenient as not liable to spill, and it is always giving off ammonia fumes. If this were used it would be possible to employ the ordinary tin calcium chloride cylinders as used for platinum papers, which would do away with the necessity of employing the fragile and transparent glass jars. On the other hand, those who wish to use glass jars will have no difficulty in obtaining these up to four or six inch diameter and twelve inches in height from any chemical apparatus dealers; but they run expensive. It would be equally as satisfactory to use a stoneware jar with a rubber ring and air-tight screw. These are much cheaper, opaque, and can be obtained in almost any size.—*Ex.*

Items of Interest

Have You Tried "Ozobrome."—It is an absurdly simple process and the results are magnificent. Ozobrome is not an imitation of carbon, it *is* carbon, with all the difficulties of carbon left out, even to printing under a negative, as no light of any sort is required.

And a choice of twelve colors, what a charm for securing exactly the long desired effect from your favorite negative. Other processes, except carbon, limit you to black and white, or sepia, but with Ozobrome any one of the twelve colors is at your service, one as easy to manipulate as the other. As no light is required for any of the processes, you may make Ozobromes in the evening, or any time you choose, just as easy, yes, easier than the making of Velox prints.

All you need is a good bromide or Velox print, a sheet of Ozobrome tissue, and sensitizing powders—and some hot and cold water.

The directions are very explicit and you cannot go wrong if you follow them. This is the time of year most of you make prints, so don't deny yourself the pleasures of this most fascinating of printing processes.

Write the Eastman Kodak Co., Rochester, N. Y., for a free descriptive booklet, and learn in detail just how simple and delightful the process is.

* * *

Photograms of the Year 1907.—American agents Tennant & Ward, New York, price $1.00 in paper, and $1.50 in cloth.

The number thirteen does not carry with it any element of ill-luck in the 13th appearance of this well-known *Annual* review of Photographic pictorial work. The criticisms of the various national schools and its members are well handled, the collection of examples of the best workers chosen with good taste and judgment and the typography and general make-up of the book of an exceptionally high order. The study of other men's photographs, is after all one of the best methods for the beginner to get acquainted with the elements of composition. We do not know of a better volume at a moderate price containing so many fine studies for this purpose.

* * *

The Penrose Process Year Book for 1907-8, Tennant & Ward, New York, American Agents, price $2.50, prepaid.

Everyone interested in the application of the graphic arts to present day processes for reproducing illustrations either for artistic or commercial purposes, finds this book of the greatest value simply as a record of the great advance made each issue in beauty of detail, and delicacy of coloring in color printing. The range of the subject is treated in a masterly manner in the various volumes. Advertisers, process workers, illustrators, publishers and printers who constantly strive to improve the originality and standing of their products are keenly alive to the importance of keeping posted in all new lines, and find in "Penrose's Pictorial Annual" a never failing key to perplexing problems for the best means to reproduce photographs and other illustrations, whether in color or black and white.

* * *

The British Journal Almanac, 1908, Geo. Murphy, Inc., New York, Agents, price, paper 50 cents, postage 27 cents, cloth, $1.00, postage 37 cents.

This well-known English Annual needs no recommendation. It will be found among the reference books of all "live" photographers whether amateur or professional. This edition deals with the new color processes and as usual has an epitome of the progress made in the many lines of photography. The usual description of the latest apparatus in the market, and of approved formulæ and tables make it worth many times its cost to those who use it.

* * *

Wellcome's Photographic Exposure Record and Diary, 1908.—Price 50 cents through photo dealers or from Burroughs, Wellcome & Co., 45 Lafayette street, New York City.

Wellcome's Photographic Exposure Record and Diary banishes the greatest obstacle to success in photography—that of correctly estimating exposure. The actual determination of correct exposure is made by means of an ingenious little mechanical calculator attached to the cover of the book. A single turn of a single scale is all that is necessary. This little instrument—with its accompanying tables giving the value of the light at all times of the day and year, and its list of the relative speeds of more than 100 plates and films—is alone worth more than the cost of the whole book. It certainly saves dozens of plates which would otherwise be wasted owing to errors in exposure.

Bound up with these printed pages of condensed photographic information is a complete diary for 1908, together with ruled pages for systematically recording the details of over 500 exposures; also pages for memoranda and for recording the exposures when printing on bromide, platinotype, carbon and other printing papers.

* * *

PHOTOGRAPHISCHE PROBLEMS by Dr. .L Cramer, 25 illustrations, 1907, published by Wilhelm Knapp, Halle a. s. Germany, price Mk. 7.50.

Dr. L. Cramer is a well-known authority on silver emulsions and as he is connected with the manufacture of dry plates, his opportunities for research in the changes that take place when a plate is acted upon by light and its subsequent development are excellent. The illustrations are all photomicrographs of film sections showing the silver grains under various conditions. The chapters are on the theory of emulsion ripening, chemical changes in silver haloids, fogs and stains, the nature of halation and the investigations of Carey Lea. The book should prove invaluable to all photo-emulsion manufacturers and students of photographic chemistry.

* * *

1908 KODAK ADVERTISING CONTEST.—$1,600.00 in cash prizes; $1,000.00 in the Professional Class; $600.00 in the Amateur Class. In our last year's Photographic Advertising Contest we offered as a first prize one thousand dollars for the three best negatives, 8 x 10 or larger, to be used in advertising the Kodak. It was our idea that we could secure photographs which would be better for camera advertising than anything we had had in the way of paintings. We believe that the results of this contest showed our ideas to be correct. Relatively we are offering more in the 1908 contest than in the previous one. The first prize for *one* negative in the Professional Class is to be $500.00. This is more money than we have ever paid for a painting for advertising purposes and should bring out good work—work that is not only good from the photographic but from the advertising standpoint.

Pictures which are simply good photographs and contain nothing showing the use or the pleasures of the Kodak system of photography are of course valueless from an advertising standpoint. What we need are pictures that forcefully and pleasingly drive home the Kodak idea, and for these we are willing to pay liberally.

We expect, through this and similar contests to not only secure valuable material for our own advertising, but to demonstrate still further the great possibilities that await the photographer in the illustrative field.

TERMS.

1. Each picture is to contain a figure or figures and is to be suitable for use as an illustration in advertising the Kodak or the Kodak system of amateur phtography.
2. Each print in Class "A" must be from a negative 5 x 7 or larger. Each print in Class "B" must be from a negative 4 x 5 or 3¼ x 5½ or larger.
3. *Prints only* are to be sent for competition—not negatives.
4. Prints must be mounted but not framed. (Mounts should show about one inch margin.)
5. No competitor will be awarded more than one prize. (This does not prevent a competitor from entering as many pictures as he may desire.)
6. Due and reasonable care will be taken of all non-winning prints and, barring loss or accident, they will be returned to their owners at our expense, but we assume no responsibility of loss or damage.
7. The negatives from which all prizes winning prints are made are to become the property of the Eastman Kodak Co., and are to be received by it in good order before payment of prize money is made.
8. Contestants who are awarded prizes must also furnish to us the written consent of the subject (in the case of a minor, the written consent of a parent or guardian) to the

use of the picture in such manner as we may see fit in our advertising.

9. All entries should be addressed to Eastman Kodak Co., Advertising Department, Rochester, N. Y.

10. In sending pictures, mark the *package* plainly, "Kodak Advertising Contest," and in the lower lefthand corner write you own name and address. Then write us a letter as follows:

I am sending you to-day by Mail, Express, charges prepaid,——— prints. Please enter in your Kodak Advertising Competition. Class.

Yours truly,

Name,
Address,

11. The name and address of the competitor must be legibly written on a paper and enclosed in a sealed envelope in the same package in which the prints are forwarded. There is to be no writing on prints or mounts.

12. We will promptly acknowledge the receipt of pictures, and when awards are made, will send each competitor a list of prize winners.

13. Only recognized professional photographers conducting a studio will be allowed to compete in Class "A." Class "B" is open to all photographers not in above classification.

14. This contest will close October 1st, 1908.

THE PRIZES.

Class A. Professional Photographers only.
Negatives 5 x 7 or Larger.

First Prize	$500.00
Second Prize	250.00
Third Prize	125.00
Fourth Prize	75.00
Fifth Prize	50.00
	$1,000.00

Class B. Amateurs only.
Negatives 4 x 5 or 3¼ x 5½ or Larger.

First Prize	$300.00
Second Prize	150.00
Third Prize	75.00
Fourth Prize	50.00
Fifth Prize	25.00
	$600.00

SUGGESTIONS.

The jury will be instructed to award the prizes to those contestants whose pictures, all things considered, are best adapted to use in Kodak (or Brownie Camera) advertising.

As reproductions of the pictures will often be in small sizes, too much detail should not be introduced.

Pictures for reproduction should be snappy —vigorous, for they lose much by the halftone process.

Where apparatus is introduced, it must be up-to-date. If you haven't the goods, you can borrow.

There may be possibilities in introducing the Kodak Tank Developer idea.

It is highly probable that we shall want to secure some negatives aside from the prize winners. In such cases special arrangements will be made.

THE JUDGES.

The jury of award will consist of photographers and of advertising men who are fully competent to pass upon the work submitted. Full attention will be paid therefore to the artistic and technical merit of the work as well as to its strength from an advertising standpoint. Announcement of the names of the judges will be made later.

Eastman Kodak Co.,
Rochester, N. Y.

* * *

Aide-Memoire de Photographie, by C. Fabre, 1907, published by Gustav-Villars, Paris, France, Price 1 fr. 75 cents. The annual is devoted entirely to the practical side of photography, and its applications. Its reviews of the novelties of the year are very good. There is also an international list of clubs and publications.